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State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-4-27

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DEERE POWER SYSTEM GROUP OF DEERE & COMPANY

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following Deere Power System Group of Deere & Company 1997 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Loader

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement in Liters</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VJD12.RJDBRB (650AA)	12.5	Turbocharger Charge Air Cooler Engine Control Module

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matters (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

<u>Exhaust Emissions (g/bhp-hr)</u>				<u>Smoke Opacity (%)</u>		
<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

<u>Engine Family</u>	<u>Exhaust Emission (g/bhp-hr)</u>				<u>Smoke Opacity (%)</u>		
	<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
VJD12.RJDBRB (650AA)	0.2	0.5	6.0	0.1	10	1	17

BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2425 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 7th day of January 1997.


R. B. Summerfield, Chief
Mobile Source Operations Division

16.03.03 - 650AA

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1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY OFF-ROAD DIESEL ENGINES

Mfgr: Deere Power Systems Group of Deere & Company Engine Family: VID12.RJDBRBDisplacement: 12.5 liters Eng Config: I-6All Codes in Eng Fam: CA 49S 50S X Cert Test Procedures: ARB EPA XValves/Ports per Cylinder 4 Strokes per Combustion Cycle 4Maximum Rated Power: 408 HP (304 kW) @ 2100 RPMIgnition: Compression X Compression with Glow Plug Spark Fuel Type(s): Dedicated X Flex-Fuel Dual Fuel Diesel X M100 M85 CNG LNG LPG Other (specify) Diesel Cert Fuel: 40 CFR 89.330-96(b)(2) Table 5 XPrimary Service Equipment: LoaderExhaust ECS (e.g., MFI, TC, CAC): EM, ECM, TC, CAC

(Use abbreviations per SAE J1930 JUN93)

Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ / stroke (lbs/hr)	Fuel Pump & Injector Part No.	ECM/ PCM Part No.	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
6125AF001A	408@2100	204 (144)	RE63054	SW50001		
6125ADW01	290@2000	152 (103)	RE63052	SW00400A		
6125AF001B	339@2100	169.5 (120)	RE63054	SW50000		
6125AF001C	350@2100	174.5 (123)	RE63052	SW00324A		
6125AF001D	375@2100	187 (132)	RE63054	SW00325B		
6125AF001E	400@2100	199.3 (141)	RE63052	SW00326A		

Date Issued:

Revisions:

Submitted: 15 November 1996

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